

Summer Tips for Nurturing Nature in Your Yard

Is something bugging you or your trees? Take a look around your yard because insects and disease can seriously harm trees and plants. Landscape plantings need light, water, and nutrients, but too much or too little of any of these resources can cause plant stress. Severe stress can weaken a tree's resistance to diseases and insects.

Preventing Insects and Disease What should you look for? Dying branches in the upper part of the canopy (called dieback), yellowing, and flagging can be symptoms of diseases and environmental stress, while leaf drop or leaf spots are common symptoms of foliar disease.

What should you do if you notice problems? Trees in overly dry areas should be watered. Compacted soil should be nourished with organic mulch to reduce the soil's bulk density and to provide slow-release nutrients to surrounding trees. If a tree has a history of foliar disease, preventative sprays can be applied to reduce the chances of disease recurrence.

Diseases Tree diseases are caused by infectious or living organisms such as fungi, viruses, and bacteria. Disorders, which can exhibit disease-like symptoms, are caused by noninfectious or nonliving agents such as nutrient deficiencies, temperature extremes, vandalism, or pollutants. Diseases develop when:

1. A pathogen is present (disease-causing agent).
2. A plant is vulnerable to that particular pathogen.
3. The environment is conducive to disease development.

Insects Often considered a "secondary problem" to environmental stress, insects can retard plant growth, weaken tree structure, and spread plant diseases by feeding on trees.

- **Chewing insects**, like beetles and caterpillars, eat leaves, flowers, and twigs. Discoloration and uneven or broken edges are signs that chewing insects might be present.
- **Sucking insects**, like aphids and mealybugs, feed on sap within the plant. Damage is indicated by the discoloration, drooping, and wilting of leaves, and the presence of honeydew.
- **Boring insects**, like bark beetles, feed beneath the bark of the tree as larvae. Most borers are attracted to, and successfully attack, stressed trees.

While some insects can threaten tree health, many are helpful and actually rid trees of dangerous or harmful insects, like ladybugs which eat aphids.

Diagnosis and Treatment

Correct diagnosis of plant health problems requires careful examination of the situation.

- Accurately identify the plant. Insects and disease are plant-specific, limiting the number of suspected pests.
- Look for a pattern of abnormality. Compare the affected plant with others on the site, especially those of the same species.
- Carefully examine the landscape. The history of the property and the adjacent land may reveal many problems.
- Examine the roots. Note their color. Brown or black roots may signal problems.
- Check the trunk and branches. Wounds in the trunk can provide entrances for pathogens and wood-rotting organisms.
- Note the position and appearance of affected leaves. Dead leaves at the top of the tree are usually the result of environmental or mechanical root stress. Twisted or curled leaves may indicate viral infection, insect feeding, or exposure to herbicides.

Treatment depends on the particular insect or disease problem, the species of plant or tree affected, the extent of the problem, factors specific to the environment, and local regulations. Homeowners who have doubts about how to proceed should consult a tree care professional for advice.

This article is provided as part of a public educational campaign on trees in the City of Milpitas. Copyright International Society of Arboriculture. Used with permission. For more information on Milpitas city street trees, contact the Public Works Department at (408) 586-2601.